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In the Spotlight

McGraw-Hill to Publish K8AIT Internet Textbook

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McGraw-Hill Children's Science Books has signed an agreement with Cislunar Aerospace, Inc. to publish a printed version of the *K-8 Aeronautics Internet Textbook. The Big Book of Air and Space Flight Activities* should arrive in bookstores in the fall.

All royalties Cislunar earns from the book's sale will be used to support and create new materials for the LTP K8AIT Web site (**http://wings.ucdavis.edu**).

"This is just what we had hoped for," said K8AIT principal investigator and book editor, Dr. Jani Macari Pallis. "So many people donated their time and energy to K8AIT that we made the decision from the start that any proceeds from commercialization would be invested in the Web site."

As the name suggests, the book will also include materials on spaceflight. Clearly, that's new for K8AIT. Pallis, who developed the text and lessons, said that current topics, such as the International Space Station, are included. McGraw-Hill even gave Cislunar a small grant for additional graphics development. The spaceflight text, lessons, and new graphics are being added to the existing K8AIT site.

The Internet has been a great source of synergy for Cislunar Aerospace—not only did they first discover the original NASA Aeronautics CAN notice on NASA's Spacelink, but believe it or not, McGraw-Hill editor Mary Loebig Giles found K8AIT while browsing on the Web.

"Mary e-mailed us and asked if we had ever considered a printed version of the Web site. The collaboration took off from there," said Pallis. "What's even more amazing to me is that the entire editing process with McGraw-Hill, for both text and graphics, has been conducted via the Internet. Mary and I have never met—and the days of redlined paper manuscripts are gone! Mary recently moved to London, but because of easy Internet availability there was absolutely no disruption in the book's editing."

The book project could not have gone forward without strong NASA support. "There were several levels of approval needed from NASA and LTP program manager Mark Leon. HPCC aeronautics program manager Christiy Budenbender, NASA contract officer Jill Willard, Rosa Tonarelli from NASA's Commercial Technology Office, and HPCC technical writer Pat Kaspar all stepped up to help us. They were all incredibly supportive and enthusiastic."

"I think that it's a tribute and a tangible indication of the success of NASA's LTP and all the 1995 NASA Aeronautics CANs that so many of the Aeronautics CAN teams have been able to commercialize products based on those original agreements. Those products help ensure continued use of the projects after NASA funding has ended and expand usage by attracting new individuals to NASA-sponsored work. NASA has been very supportive in allowing these commercial partnerships."

News from NASA

RSPAC in Transition Phase; Group Still Available for Services

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The Remote Sensing Public Access Center (RSPAC) is in a transition phase prior to the conclusion of its contract in July. All participants in the Learning Technologies Project are being asked to submit any requests they have for RSPAC services as soon as possible to help RSPAC in planning and to allow them to serve the projects better in their own efforts.

To request support from RSPAC, please contact Phyllis Griggs at pgriggs@rspac.ivv.nasa.gov, or feel free to contact any other members of the RSPAC staff.

RSPAC provides general and specific support to all groups affiliated with NASA's Learning Technologies Project. For more information about RSPAC's support services, visit **http://developers.ivv.nasa.gov/rspac/index.html**.

This bulletin will also be available in Adobe Acrobat format on the Developers' Workshop Web site at: **http://developers.ivv.nasa.gov/collab/pubs/bulletin/**

News Bytes

NASA's LTP Web Site Wins Links2Go's "High Performance Computers" Award

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NASA's Learning Technologies Project Web site, located online at **http://ltp.ivv.nasa.gov**, was selected as a Links2Go "Key Resource" in the High Performance Computers topic at **http://www.links2go.com/topic/High_Performance_Computers**.

Each quarter, Links2Go samples millions of Web pages to determine which pages are most heavily cited by Web page authors. The most popular pages are downloaded and automatically categorized by topic. At most, 50 of the pages related to a particular topic are selected as "Key Resources." Of the 50 pages selected as Key Resources for the High Performance Computers topic, NASA's Learning Technologies Project's page ranked 39th.

The Links2Go Key Resource award differs from other awards in two important ways. First, it is objective. Most awards rely on hand selection by one or more "experts," many of whom have only looked at tens or hundreds of thousands of pages in bestowing their awards. Selection for these awards means no more than that one person, somewhere, noticed the page and liked it enough to select it.

The Key Resource award, on the other hand, is based on an analysis of millions of Web pages. Any group or organization that conducts a similar analysis will arrive at similar conclusions. When Links2Go says a page is a Key Resource, the page is considered one of the most relevant pages related to a particular topic on the Web today, as determined by an objective statistical measure applied to an extremely large data set.

The Key Resource award is also exclusive. Hundreds of people request that a page be added to one or more topics per week. All of these requests are denied. The only way to get listed as a Key Resource is to achieve enough popularity for an objective analysis to select a page automatically. Links2Go does not accept fees, offers of link exchanges, free advertising, or anything else to add new sites to its lists. Fewer than one page in one thousand will ever be selected as a Key Resource.

Learning Technologies Channel Upcoming Schedule Announced

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The following is a schedule of upcoming events on NASA's Learning Technologies Channel. For more information or for access to these events, go to **http://quest.arc.nasa.gov/ltc/schedule.html.** Most past events are archived and clips are available at **http://quest.arc.nasa.gov/ltc/archive99.html**.

May events for the NASA Quest/Learning Technologies Channel include:

Tuesday, May 18
Counting the Stars: Math, Arts, and Space Science
US Department of Education
Satellite Town Meeting
5-6 p.m. Pacific (8-9 p.m. Eastern)

Tuesday, May 18
Marine Sanctuary: Prickly Shark Ecology
NOAA's Monterey Bay National Marine Sanctuary (MBNMS)
10-11 a.m. Pacific (1-2 p.m. Eastern)
Monterey Canyon is the only place that prickly sharks have been observed and tagged in large numbers. The DeepWorker will be used to conduct visual transects at the heads of several major canyons.

Wednesday, May 19
The ISS Tour of the Mockup and Training Facility
Johnson Space Center
10-11 a.m. Pacific (1-2 p.m. Eastern)
Join us for our regularly scheduled tour of the International Space Station mockup and training facility at the Johnson Space Center (JSC) in Houston, Texas.

Thursday, May 20
STS-96 LAUNCH of Shuttle Discovery
8:32 a.m. Eastern
Join us for the launch of Discovery as the shuttle departs for the International Space Station to deliver SPACEHAB and other important assembly equipment.

Thursday, May 27
The Great American Fish Count
NOAA's Channel Islands National Marine Sanctuary (CINMS)
11 am-Noon Pacific (2-3 p.m. Eastern)
From Anacapa, Ed Cassano, manager at CINMS, will take viewers underwater to demonstrate how the fish count is conducted and explain what is learned during this project.

Nothin' but Net

Creating Clipping Paths for Page Layout Programs

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Trying to import an image into a page layout program but a little white square background keeps appearing, even though the image is rounded? The reason is that page layout programs (like Illustrator, PageMaker, and Quark Xpress) use a post script, but image editing programs (like Photoshop) don't. The layers option in Photoshop allows for transparency, but page layout programs don't have the same capability. To get rid of the white square background around the image in the page layout program, a clipping path must be created in Photoshop.

To create a clipping path:

•In Photoshop, select the object(s) to be placed into the layout program.

•Open the paths options palette.

•Use the paths options menu to convert the selection to a working path.

•Click on the path's tab and name the path.

•Use the paths options menu to convert the path to a clipping path.

•The paths dialog box appears. Select the path just created and click OK.

•Save the image as a Photoshop EPS file. When the EPS format dialog box appears, leave the options unchanged and click OK to save.

Now that the image is saved with a clipping path and saved as a Photoshop EPS file, it is ready to be placed into Illustrator, PageMaker, or Quark Xpress. Once the image is imported it is ready to be placed wherever it is needed and without the white square background.

When creating a clipping path, there are some basic principles to remember:

•Keep the clipping paths as simple and as short as possible.

•Never use a flatness value (see below) of zero in the clipping path dialog box. As a general rule, increase the flatness value to around 6.

•Once the image is in the layout program, don't rotate or skew the clipped image.

•The longer the clipping path has to be, the simpler and less detailed it should be.

•If the edge detail is critical to an object, use an image editing program to define the edge. Don't try to capture fine edge detail with the clipping path.

One of the options in the clipping paths dialog box is the flatness value. The flatness value controls the allowable error in the path precision and can range from 0.2 to 100. The flatness value is resolution-dependent with respect to the printer being used. The higher the printer's resolution, the higher the flatness value should be set. If the flatness value is set too low the PostScript Error "limitcheck" will occur when printing.

Some flatness value recommendations:

Printer Resolution	Flatness Value
300 dpi	1 to 3
600 dpi	2 to 6
1200 dpi	6 to 10
2400 dpi	8 to 12
3000 dpi	10 to 16

For more information, check out Clipping Path Do's and Don'ts at **http://206.161.109.11/clpath.html** and Tom Ruley Communications Photoshop 4–Clipping Paths at **http://www.tomruley.com/Photoshop4_pages/ClipPath4.html**.

Highlights & Happenings

A Firsthand Look at "Live" Broadcast Technology

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On Thursday, May 6, I gave a paper in the panel discussion of "Live Broadcasting—Do's and Don'ts" at the REAL Networks Conference '99 in San Francisco. The talk was well received and about 20 people came up afterward to chat with Joe Hering and me. Several were interested in collaborations, including a Native American Internet radio station, a Canadian broadcasting system, a computer education (Linux) group, and a local (LLNL) astronomy group. I also met some possible collaborative partners with ONR (at Stennis) and NASA HQ. The talk should be on the Net in the next couple of weeks at **http://www.real.com/conference**. Slides are available at **http://quest.arc.nasa.gov/test/real99.ppt.**

My general impression is that we are still at the leading edge of "live" broadcast technology. Several companies have live Webcasting products, but I don't think they have anything significantly better than what we could "roll out" on our own. There were a number of products that would make video production and encoding a lot simpler. I have also found two services that do "live" transcription. One company uses traditional court reporters using Cheetah software. The other group, Virage, uses computer speech recognition, and is supposed to be 90% accurate for clearly spoken English. The benefit of Virage is that it encodes a searchable index alongside the audio of the transcript. This can be put into a database so that if you search for "John Glenn" it will queue up a clip with that phrase in it.

There are other technical issues that apply to the server side, but these apply to future use of G2 technology. Hardware continues to get cheaper. I saw a $99 encoding card that is supposed to work great for portable encoders. I also saw a $7,000 TV production studio in a box—the demo included a live Star Trek Webcast. Coming soon is a $99 product that will allow users to take audio off the Internet and put it onto a tape or CD.

If you would like to be on the LTP Bulletin mailing list, please send e-mail to Scott Gillespie at: sgillespie@rspac.ivv.nasa.gov, or write to: BDM/RSPAC, 100 University Drive, Fairmont, WV 26554. Phone: (304) 367-8324, fax: (304) 367-8211.

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